In the Claims

1. (Twice Amended) An apparatus for securing an inner vessel having a bottom and a side wall and an outer vessel having a bottom wall and a side wall, within a cryogenic system, said inner vessel adapted to be enveloped by said outer vessel, wherein a vacuum may be maintained between the outer vessel and the inner vessel, said apparatus comprising:

at least one bottom-support component having at least one mating structure selected to keep the surface area of contact with the outer vessel to a minimum;

at least one side-support component selected to keep the surface area of contact with the outer vessel to a minimum:

wherein said side-support component comprises at least one mating structure;

wherein said mating structure comprises at least one mating pair of one male-adapter and one female-receptor;

wherein one part of said mating pair is secured to the outer side wall of the inner vessel while the other part of said mating pair is secured to the inner side wall of the outer vessel;

wherein a fastening mechanism is employed to prevent relative rotational movements of the two parts of said mating pair, about a vertical axis near the geometric center of the outer vessel; and

wherein the inner vessel is prevented by said fastened side-support component from rotational movements about a vertical axis near the geometric center of the outer vessel;

wherein said mating structure comprises at least one mating pair of one male-adapter and one female-receptor;

wherein one part of said mating pair is secured to the bottom of inner vessel while the other part of said mating pair is secured to the inner bottom of the outer vessel;

wherein said bottom-support component is adapted to hold the inner vessel at a positon elevated from the inner bottom of the outer vessel under a compression force;

wherein the inner vessel is prevented by said bottom-support component from horizontal and lateral movements.

2. (Cancelled)

3. (Original) The apparatus as recited in claim 1, further comprising at least one side-support component:

wherein said side-support component comprises at least one mating structure;

wherein said mating structure comprises two female receptor parts and one connecting pin-like element;

wherein one female receptor part of said mating structure is secured to the outer side wall of the inner vessel while the other female receptor part of said side-support mating structure is secured to the inner side wall of the outer vessel;

wherein a fastening mechanism is employed to secure at least one end of the connecting pin-like element of said side-support mating structure to prevent relative rotational movements of the two female receptor parts of said side-support mating structure, about a vertical axis near the geometric center of the outer vessel;

wherein the inner vessel is prevented by said fastened side-support mating structure from rotational movements about a vertical axis near the geometric center of the outer vessel.

4. (Original) The apparatus as recited in claim 1, wherein the cryogenic system is a high-temperature superconductor device system.

5. (Once amended) The apparatus as recited in claim 1, wherein the cryogenic system uses liquid nitrogen for cooling.

6. (Canceled)

7. (Canceled)

8. (Twice amended) An apparatus for securing an inner vessel and an outer vessel, within a cryogenic system operating at cryogenic temperatures, the inner vessel adapted to be enveloped

by the outer vessel, wherein a vacuum may be maintained between the outer vessel and the inner vessel, said apparatus comprising:

mating structure means coupled in compression with the inner vessal and the outer vessel for preventing rotational movement of the inner vessel about a vertical axis with repect to the outer vessel, wherein said mating structure means is selected to have reducted surface area to minimize temperature transfer from the inner vessel to the outer vessel;

mating structure means coupled to the inner vessel and the outer vessel for preventing lateral movement of the inner vessel with respect to the outer vessel, wherein said mating structure is selected to have reduced surface area to minimize temperature transfer from the inner vessel to the outer vessel; and

mating structure means for preventing axial movement of the inner vessel with respect to the outer vessel, wherein said mating structure means is selected to have reducted surface area to minimize temperature transfer from the inner vessel to the outer vessel.

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Once amended) The apparatus as recited in claim 8, wherein said mating structure means for preventing axial movement is a fixed pin-like locking strucure.

13. (Canceled)

14. (Canceled)

15. (Cancelled)